



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

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MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (M&RA)  
ASSISTANT SECRETARY OF THE NAVY (M&RA)  
ASSISTANT SECRETARY OF THE AIR FORCE (SAF/MR)

SUBJECT: Operation Iraqi Freedom Depleted Uranium Bioassay Results and Semi-Annual Data Submission

The Assistant Secretary of Defense (Health Affairs) memorandum, "Operation Iraqi Freedom Depleted Uranium Bioassay Results and Semi-Annual Data Submission," September 10, 2004, provided results of Operation Iraqi Freedom (OIF)-related depleted uranium (DU) bioassays and requested follow-on semi-annual reports. The attached chart provides the Services' DU Bioassay results through September 30, 2004. The next semi-annual Service submittals will include results through March 31, 2005, and are due May 1, 2005.

As of September 30, 2004, 1,607 personnel had undergone DU bioassays. No personnel tested had total uranium levels or DU levels that have caused or are expected to cause adverse health effects. Of those tested, 111 had total urine uranium levels above 50 ng/gram urine creatinine, considered the upper bound of normal in the U.S. civilian population. Only six had indications of DU in their urine. All six either had DU fragments removed or had suspected retained DU fragments in their bodies at the time of testing. The elevated total urine uranium result for an Air Force veteran has not been confirmed.

The total includes 821 Army submissions that are uncategorized for their DU exposure level due to incomplete or missing exposure assessment forms. For some of the uncategorized samples, the urine results are considered preliminary. The Army is now collecting adequate urine samples and ensuring completion of the forms.

More detailed supplemental information and clinical guidance on these topics and others is available on the Department of Defense Deployment Health Clinical Center Web site at [www.pdhealth.mil](http://www.pdhealth.mil). My point of contact is Colonel Deneice Van Hook, and she may be reached at 703-578-8523 or [Deneice.VanHook@deploymenthealth.osd.mil](mailto:Deneice.VanHook@deploymenthealth.osd.mil).

*For Stephen L. Jones*  
William Winkenwerder, Jr., MD

Attachment:  
As stated

cc:

Assistant Deputy Under Secretary (ESOH)

Assistant Secretary of Defense (Reserve Affairs)

Baltimore VA Medical Center (Dr. Melissa McDiarmid)

Department of Veterans Affairs

Director, Health and Safety, USCG

Director, Joint Staff

DoD Deployment Health Clinical Center

Surgeon General of the Army

Surgeon General of the Navy

Surgeon General of the Air Force

# Service Summary OIF Depleted Uranium (DU) Bioassay Results

## June 2003 – September 30, 2004

Level	Army	Navy/ Marines	Air Force	Total	Elevated Total Uranium	Detectable DU	Retained Fragments or Fragment- Type Injury
I	159	38	1	198	6	5	6
II	206	198	4	408	13	0	N/A
III*	169	8	3	180	2	0	N/A
<b>Uncat<sup>+</sup></b>	821	0	0	821	90	1	UNK
<b>Total</b>	1355	244	8	<b>1607</b>	111	6	6

\* Represents only the number of Level III personnel who requested and received a bioassay (testing is optional for Level III).

<sup>+</sup> This total includes those samples that were submitted with incomplete or missing exposure assessment forms.